

B.Sc.(IT) Semester - 2 (CBCS) Examination**June/July-2022 [OLD COURSE]****COMPUTER ORGANIZATION & ARCHITECTURE(CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q.1(A) Answer following. (04)
1. _____ is the full form of JK flip flop.
 2. If set = 0 and reset = 1 then output is _____.
 3. What is the output of NOR gate if both input is Low?
 4. _____ is the output of EXNOR gate if both inputs are 1.
- Q.1(B) Answer the following. (any one) (02)
1. List out Universal Gates.
 2. Explain Meaning of Computer architecture.
- Q.1(C) Answer the following. (any one) (03)
1. Define the term: Truth Table.
 2. Explain De-Morgan's theorem.
- Q.1(D) Answer the following. (any one) (05)
1. Explain Flip-flops in detail.
 2. Explain half adder and full adder in detail.
- Q.2(A) Answer followings. (04)
1. IC stands for _____.
 2. What is clock pulse?
 3. In decoder, three inputs will generate _____ outputs.
 4. 8*3 encoder is also called _____.
- Q.2(B) Answer the following. (any one) (02)
1. Explain buffer register.
 2. What is the meaning of serial in parallel out register?
- Q.2(C) Answer the following. (any one) (03)
1. Explain Ripple counter.
 2. Explain De-Multiplexer 1*4.
- Q.2(D) Answer the following. (any one) (05)
1. Explain 3*8 Decoder in detail.
 2. Explain Bi-Directional Register.
- Q.3(A) Answer followings. (04)
1. In 45.68 _____ is the Fractional part of the given number.
 2. Radix[BASE] of Decimal is _____.
 3. In _____ number system the radix is 8.
 4. Radix[BASE] of Binary is _____.
- Q.3(B) Answer the following. (any one) (02)
1. Explain term Mantissa.
 2. What is Exponent?
- Q.3(C) Answer the following. (any one) (03)
1. Division: 1110011.10/110
 2. Explain Floating point Representation.
- Q.3(D) Answer the following. (any one) (05)
1. Explain Error Detection Code with parity bit?
 2. Multi: 101*110

- Q.4(A) Answer followings. (04)
1. Full form of PL.
 2. How many bits are used in Control Word?
 3. Full form of CPU.
 4. In _____ notation operators are first.
- Q.4(B) Answer the following. (any one) (02)
1. Explain Control word in detail.
 2. Make Polish and Reverse polish Notion.
 $\rightarrow (A+B)*C.$
 $\rightarrow (A+B)/(C+D)$
- Q.4(C) Answer the following. (any one) (03)
1. Explain Accumulator Register.
 2. Explain Arithmetic and Logic unit.
- Q.4(D) Answer the following. (any one) (05)
1. Explain General Register Organization.
 2. Explain interrupts and its types in detail.
- Q.5(A) Answer followings. (04)
1. DMA stands for_____.
 2. Full form of BG.
 3. BR stands for _____.
 4. Full form of RS.
- Q.5(B) Answer the following. (any one) (02)
1. Explain Address Bus.
 2. Explain data bus.
- Q.5(C) Answer the following. (any one) (03)
1. Explain Working of DMA.
 2. Explain IOP in detail.
- Q.5(D) Answer the following. (any one) (05)
1. Explain DMA controller in detail.
 2. Explain DMA transfer in detail.
